### **PROJECT LOCATION**

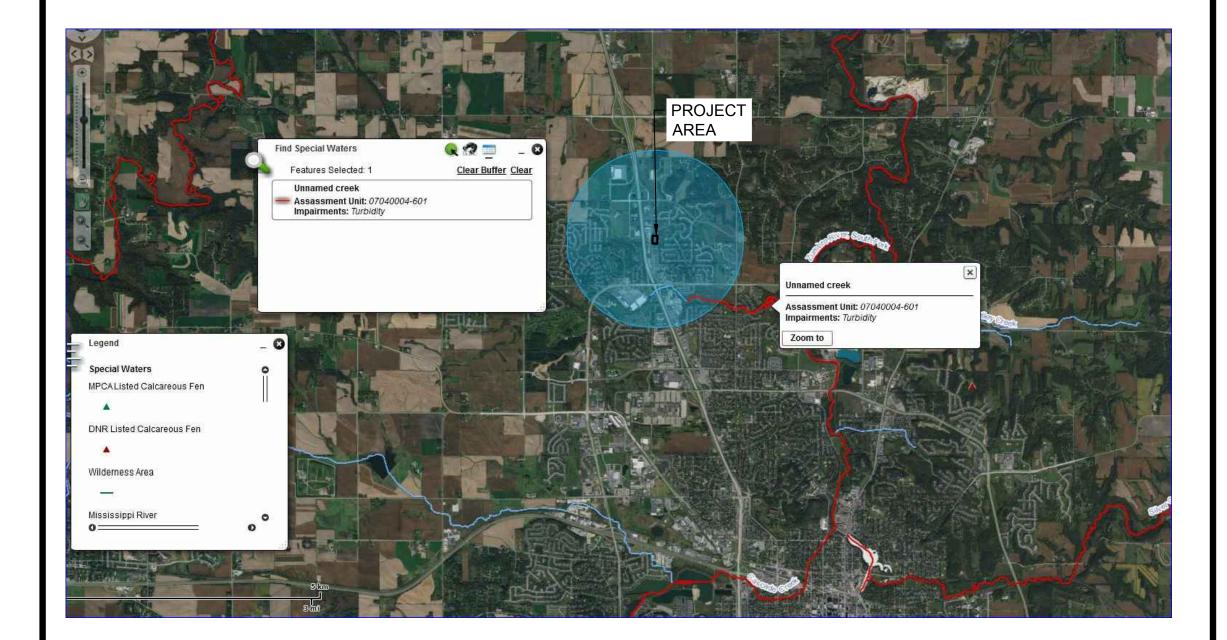
THE PROPOSED PROJECT IS LOCATED AT 5930 BANDEL ROAD NW IN ROCHESTER, MN 55901

### PROPOSED SITE DESCRIPTION

PROPOSED WORK WILL INCLUDE GRADING OF ATHLETIC FIELDS

### **RECEIVING WATERS**

WATER BODY	TYPE	SPECIAL WATER?	IMPAIRED WATER?	APPROVED TMDL?	POLLUTANT
UNNAMED CREEK AUID:07040004-601	CREEK	NO	YES	YES	TURBIDITY



### **DATES OF CONSTRUCTION**

4/1/18 TO 12/31/18

### **CONTACT INFORMATION**

OWNER:

MIDWEST BIBLE BAPTIST CHURCH

5930 BANDEL ROAD NW

ROCHESTER, MN 55902

CONTACT: PASTER CALEB HANSON

EMAIL: CALEBHANSON2005@GMAIL.COM

PHONE: (507) 259-4106

CONTRACTOR:

CONTACT

EMAIL:

PHONE:

**INLET CONTROL:** 

### **ESTIMATED EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES**

7 EACH

**SILT FENCE QUANTITY:** 1,423 LF 9,747 SY **EROSION CONTROL BLANKET (CAT 3)** 

**ROCK CONSTRUCTION ENTRANCE/EXIT** 1 EACH

# **PROJECT AREAS**

TOTAL DISTURBED AREA = 6.00 ACRES EXISTING IMPERVIOUS AREA = 0.00 ACRES NEW IMPERVIOUS AREA = 0.00 ACRES INCREASE IN IMPERVIOUS AREA = 0.00 ACRES

### Unique Storm Water Management Features

There are no unique storm water management features proposed on site. Storm water discharge from the site follows existing flow patterns to existing City infrastructure.

### TMDL Implementation Plans Containing Storm Water Requirements

Long term maintenance shall include maintaining the vegetated areas.

A TMDL Implementation Plan currently exists for the receiving waters on the project.

### Long Term Maintenance

### Erosion Control Supervisor Requirements

The Contractor must identify an Erosion Control Supervisor (ECS) who is knowledgeable and experienced in the application of erosion and sediment control Best Management Practices (BMP's). The ECS must work with the Contractor to oversee and implement the SWPPP, and the installation, inspection, and maintenance of erosion and sediment control BMP's before, during and after construction. The Contractor/ECS is required to comply with the training requirements in Part III.A of the NPDES Permit. The permittee(s) shall ensure that employees are properly trained in the following areas with certification proof provided at the pre-construction conference.

### **SWPPP Preparation:**

Name: Joey Weiss Dates of Training: January 30, 2018 Instructors Name providing Training: John Chapman

Content of Training (incl. hours):Design of Construction SWPPP Recertification(6 hours)

### Site Manager:

Name: <u>_TBD</u>	
Dates of Training:	_
Instructors Name providing Training:	
Content of Training (incl. hours):	
BMP Installer:	
Name: _TBD	
Dates of Training:	_
Instructors Name providing Training:	-
Content of Training (incl. hours):	

The Contractor/ECS shall develop a chain of responsibility with all operators on the site to ensure that the SWPPP will be implemented and stay in effect until the project site has undergone Final Stabilization in accordance with Part IV.G of the NPDES Permit and a Notice of Termination (NOT) has been submitted to the MPCA in accordance with Part II.C of the NPDES Permit. The Contractor/ECS must routinely inspect the entire construction site at least once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inch in 24 hours. The Contractor shall take action to eliminate any deficiencies found during these inspections and contact the MPCA if contaminated stormwater has reached any surface water. The Contractor must provide 2 rain gauges to be installed on the construction site. Inspections, maintenance and documentation must be in accordance with the NPDES Permit Part IV.E. See Part III.D of the NPDES Permit for record retention requirements. Copies of the inspection records are to be submitted to the Engineer.

The Contractor/ECS must amend the SWPPP as necessary to include additional requirements, such as additional or modified BMP's, designed to correct problems or address situations in accordance with Part III.A.5 of the

Individual Site Plans will be required by the E.C. Supervisor as deemed necessary. Refer to MnDot 1717.

A daily inspection log will be required by the E.C. Supervisor of all sediment, erosion and materials on site (ie: chemicals, etc.). This log shall be presented daily to the observer on site and kept current.

The E.C. Supervisor shall provide an inlet staging schedule and protection plan for the entire project. This plan and schedule shall be presented to the engineer at the pre-construction conference. Minimum requirements of the plan and schedule shall include:

- date of proposed inlet protection device installation
- protection device utilized
- estimated duration of device in operation
- schedule of subsequent devices that will be utilized for inlet protection

The contractor shall have a petroleum release plan and shall have all necessary materials on hand to implement the plan. All employees shall be trained in implementation of the plan. The MPCA shall be informed of any petroleum spills.

### STORM WATER POLLUTION PREVENTION PLAN NOTES:

Temporary and Permanent Erosion Control Practices

BMP's proposed for temporary and permanent erosion control are shown on the on sheet C4.1 and are further identified as follows:

### **Temporary Erosion Control Methods**

All disturbed soil areas shall be temporarily mulched with Type 1 mulch within 14 days if the area is not being actively worked. Temporary seed mix 22-111 at a rate of 100 lbs/ac will be used only in cases where disturbed soil areas are anticipated to remain unworked in excess of 14 days prior to placement of Type 1 mulch.

### Permanent Erosion Control Methods

Permanent erosion control will be achieved by using Seed Mixture 35-241 at a rate of 36.5 lbs/ac, Type 1 Fertilizer with a composition of 0-10-20 at a rate of 350 lbs/ac, and Mulch Material Type I at 2 tons / acre on all disturbed construction areas.

### Temporary Sediment Control Methods

Silt fence or windrowed topsoil will be used as the primary control. Biorolls will be used as secondary control at any areas of high velocity drainage to prevent sediment from draining off site. Rock construction entrances shall be placed at all locations construction vehicles will be exiting the project area.

### Unique Environmental Concerns

The project site is located within one (1) mile radius of identified impaired streams/lakes. Per the NPDES Permit, the project must incorporate the additional BMP's found in Appendix A, parts C.1 and C.2.

### Section. C.1, During Construction:

a.) Stabilization of all exposed soil areas must be initiated immediately to limit soil erosion but in no case completed later than seven (7) days after the construction activity in that portion of the site has temporarily or permanently cease

b.) Temporary sediment basin requirements described in Part III.C must be used for common drainage locations that serve an area with five (5) or more acres disturbed at one time.

### Section C.2, Post Construction:

The water quality volume that must be retained on site by the project's permanent stormwater management system (as described in Part III.D) shall be one (1) inch of runoff from the new impervious surfaces created by the project.

### Dewatering

It is not anticipated that dewatering will be required during construction.

### Timing of BMP Installation

Erosion and sediment control BMP's must be installed as necessary to minimize erosion from disturbed surfaces and capture sediment onsite. All BMP's must conform to Part IV of the NPDES Permit.

### Construction Sequencing

- 1. Identify and label protection areas such as buffer zones, filter strips, trees, etc... Complete prior to any land disturbing activities.
- 2. Designate construction access / entrance, construction routes, equipment parking areas and cutting of vegetation - Stabilize disturbed area for the construction entrance immediately with aggregate.
- Install diversions, silt fence, perimeter dikes and inlet / outlet protection Install key BMP's before commencing with grading operations. Install additional run-off control as necessary during grading
- Begin grading operations Begin grading after key BMP's are installed. Topsoil shall be stripped and stockpiled for the duration of the grading operations. Install BMP's around topsoil stockpile area(s) immediately following placement.
- Surface stabilization including temporary and permanent seeding and mulching Apply temporary and/or permanent stabilization measures immediately on all disturbed areas where work is delayed or completed.
- Maintenance Maintenance inspections shall be performed weekly, and maintenance repairs shall be made immediately after periods of rainfall and / or BMP failure.

### **Erosion Prevention Practices**

The Contractor/ECS is responsible for the Erosion Prevention Practices contained in Part IV.B of the NPDES Permit. The Contractor/ECS must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading and other construction practices that minimize erosion. The location of areas not to be disturbed must be delineated (marked) on the development site before work begins.

All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the construction site, must be stabilized within 200 lineal feet from the property edge, or from the discharge into any surface water. Stabilization must be complete within 24 hours after connecting to surface water.

Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours after connection to a surface water.

### **Sediment Control Practices**

The Contractor/ECS is responsible for the Sediment Control Practices contained in Part IV.C of the NPDES Permit. Sediment Control Practices must be installed on all down gradient perimeters before any upgradient land disturbing activities begin. There shall be no unbroken slope length greater than 75 feet for slopes with a grade of 3:1 or steeper. These practices must remain in place until Final Stabilization has been established in accordance with Part IV.G of the NPDES Permit.

The timing of installation of Sediment Control Practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Short-term activities must be completed as quickly as possible and the practices must be installed immediately after the activity is completed. However, the Sediment Control Practices must be installed before the next precipitation event even if the activity is not complete.

All storm drain inlets must be protected by appropriate BMP's during construction until all sources with potential for discharging to the inlet have been stabilized. Inlet protection may be removed if a specific safety concern has been identified and the procedure in Part IV.C.4 of the NPDES Permit is followed.

Temporary soil stockpiles must have super duty silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduit and ditches unless there is a bypass for stormwater.

Vehicle tracking of sediment from the construction site must be minimized by BMP's such as stone or wood chip pads, concrete or steel wash racks, or equivalent systems. Street sweeping with collection must be used if such BMP's are not adequate to prevent sediment from being tracked onto the street (see Part IV.E.4.d of the NPDES

Dewatering related to the construction activity must comply with Part IV.D of the NPDES Permit. Dewatering discharge that may have turbid or sediment laden discharge must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible and BMP's must be implemented to prevent water containing sediment or other pollutants from being discharged to a Water of the State.

Contractor may construct temporary sedimentation basins in accordance with Part III.B of the NPDES Permit.

### Pollution Prevention:

Each contractor on site is individually responsible for maintaining a clean and safe work site. The person responsible shall dispose of all solid waste properly and in compliance with the MPCA disposal requirements. Solid waste includes but is not limited to: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris. The person responsible shall be responsible for all hazardous materials during construction. Oil, gasoline, grease, paint and other hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks and unwanted discharges. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in accordance with the MPCA regulations. External washing of trucks and other construction equipment is prohibited on this project site.

Concrete washout site: all liquid and solid wastes generated by concrete washout operations must be contained in a leak proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter the ground water is considered an impermeable liner. Another option to provide an impermeable basin in sandy soils is to construct a basin 18 inches deep with a minimum size of 12 feet by 14 feet. The basin should then be lined with a 10-mil poly liner that is secured on the perimeter. The liquid, solid wastes, and hand tools must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with the MPCA regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

The following telephone numbers are provided for assistance to the contractors and are not necessarily comprehensive; it is the responsibility of the individual contractor to make sure of proper notification.

### Poison Control (800) 222-1222

24 Hour Spill Emergency (800) 422-0798

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Received by ROPD 03-28-2018

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Construction Practices to Minimize Storm Water Contamination

- Stockpiles should be constructed away from slopes and natural drainage ways.
- Collected solid waste, sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal requirements.
- No construction materials can be buried on site.
- Licensed sanitary waste management handler must dispose of sanitary waste.
- Fertilizers must be stored in covered locations.
- Restricted access to chemical storage areas must be provided to prevent vandalism.
- All chemicals must be stored in locked containers when not in use.
- Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge.
- Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
- Vehicles must be monitored for leaks and preventative maintenance scheduled.
- Spill kits must be available during equipment fueling and maintenance operations.
- External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.
- Asphalt substances must be applied according to manufacturers recommendations.
- Spray guns must be cleaned on removable surfaces such as tarpaulins.
- Contractor/Erosion Control Supervisor must make a spill response plan before the application of any chemical that may be harmful to the environment.
- All spills must be reported immediately. Spill cleanup materials must be available on site. Material shall include but not limited to brooms, mops, rags, gloves, absorbent material, sand plastic and metal containers. Spills that reach storm water conveyance systems connected to a Water of the State must be immediately reported to the MPCA State Duty Officer.
- Contractor must control weeds on the entire project site.
- Form release oil must be applied over a pallet covered with absorbent material to collect excess fluid. The absorbent material shall be replaced when saturated.
- Dust control must be provided as conditions warrant.
- If this project is not stabilized before winter conditions stop construction activities, it shall be the contractor's responsibility to ensure sediment does not reach a water of the state. A written plan of this activity shall be presented to the engineer 1 month before expected project shut down for the season occurs. This plan shall include but not be limited to:
  - date of proposed bmp employment
  - duration of bmp's employed
  - schedule of subsequent bmp's employed

EXISTING HOUSE/

EXISTING SHED

SHED

FUTURE AUDITORIUM FFE: 1098.50

24" RCP CULVERT

BANDEL

EXISTING

**CATCH BASIN** 

Cost for permanent and temporary erosion and sediment control measures shown on the plans will be paid on a lump sum basis. The costs to maintain and remove these devices shall be incidental to the contract. The cost for temporary seeding, soil stabilization, or any additional temporary erosion and sediment control devices shall be incidental to the contract. All costs for documentation required by the Permit shall be incidental to other items unless a specific bid item is established.

### Contacts

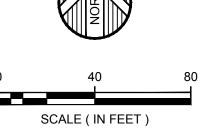
		*********	
Agency *******	Permit	Name *********	Phone Numbe
MPCA	NPDES	Roberta German	507-206-2629
MPCA	NPDES	David Bodovinitz	507-206-265
SWPPP Design	WSN	Joey Weiss	507-206-2129
EC Supervisor	•		

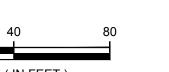
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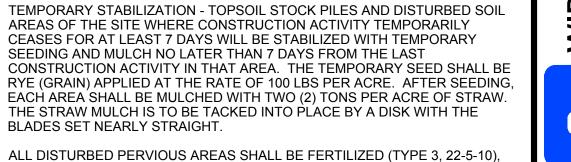
Amendments to the SWPPP:

# PROPOSED FEATURES LEGEND

	DENOTES PROPERTY BOUNDARY
1035	DENOTES PROPOSED CONTOUR ANNOTATION
<b>x</b> 1035.00	DENOTES PROPOSED GUTTER OR FINISH ELEVATION (UNLESS OTHERWISE NOTED)
	DENOTES PROPOSED DRAINAGE ARROW
* * * * * *	DENOTES PROPOSED SILT FENCE
	DENOTES TEMPORARY ROCK CONSTRUCTION ENTRANCE
	DENOTES PROPOSED EROSION CONTROL BLANKET - CAT 3
***	DENOTES PROPOSED INLET PROTECTION







MNDOT SEEDING MANUAL THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER.

CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS

SEEDED (MNDOT 25-141) AND MnDOT CAT 3 EROSION CONTROL BLANKET

PLACED UNLESS OTHERWISE NOTED OR SHOWN IN PLANS. ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER THE

TEMPORARILY OR PERMANENTLY CEASED. SEEDING SHALL BE PER THE

SHALL BE APPLIED FOR ON THIS PROJECT.

STANDARD PLATE NO. 7-06D

PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER OR OUTLET.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT SEDIMENT DOES NOT LEAVE THIS SITE. IT IS REQUIRED THAT THE CONTRACTOR INSTALL A STABILIZED VEHICLE EXIT TO KEEP SEDIMENT TRACKING TO A MINIMUM. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY UNTIL ACCEPTANCE OF THE WORK BY THE OWNERS.

ANY DEPOSITING OF SEDIMENT OR DEBRIS ON NEW OR EXISTING PAVEMENT, OR IN EXISTING STORM SEWERS SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEANED. ANY TRACKING OF SEDIMENT OR DEBRIS FROM CONSTRUCTION TRAFFIC ONTO PUBLIC RIGHT OF WAY SHALL BE REMOVED BY THE END OF EACH WORK DAY AND AFFECTED

THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER RAIN EVENTS FOR DAMAGE TO EROSION CONTROL DEVICES. IF DAMAGED OR INEFFECTIVE EROSION CONTROL DEVICES ARE DISCOVERED, THEY SHALL BE REPAIRED OR REPLACED. THE CONTRACTOR SHALL MAINTAIN INSPECTION RECORDS. WHICH INCLUDE DATE AND TIME OF INSPECTIONS, DATES OF RAINFALL EVENTS, FINDINGS OF INSPECTIONS, CORRECTIVE ACTIONS TAKEN (INCLUDING DATES AND TIMES), AND DOCUMENTATION OF ANY CHANGES TO THE TEMPORARY OR PERMANENT EROSION CONTROL PLANS MADE DURING CONSTRUCTION.

11. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE CLEARING, GRUBBING REMOVAL OF PAVEMENT AND MISCELLANEOUS STRUCTURES SHALL BE

PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF MN/DOT 2104.

12. ALL PROPOSED ELEVATIONS ARE TO TOP OF PAVING, GUTTER, OR FINISHED GRADE UNLESS NOTED OTHERWISE. PROPOSED ELEVATIONS ARE INTENDED TO PROVIDE POSITIVE DRAINAGE TOWARDS CATCH BASINS AND/OR OUTLETS. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE REQUIRED ELEVATIONS, WHICH WILL PROMOTE POSITIVE DRAINAGE THROUGHOUT THE PROJECT SITE.

13. THE SITE HAS NOT NECESSARILY BEEN DESIGNED TO BALANCE THE ON-SITE MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EARTHWORK QUANTITY ON THIS SITE. EXCESS MATERIAL, IF ANY SHALL BE DISPOSED OF OFF-SITE. THE CONTRACTOR SHALL IMPORT SUITABLE MATERIAL AS NEEDED.

14. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE ENGINEERING DEPARTMENTS AND UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING UTILITIES.

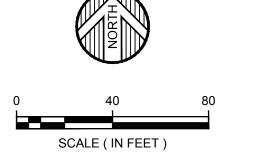
15. SOME SLOPES ON SITE EXCEED 4:1. SLOPES STEEPER THAN 4:1 WILL BE STABLE FROM LAND SLIDING AND SURFACE EROSION.

16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION. SHALL UTILITY RELOCATIONS BE REQUIRED, THE CONTRACTOR SHALL COORDINATE THE RELOCATION OF ALL UNDERGROUND UTILITIES WITH THE RESPECTIVE UTILITY OWNERS.

SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.

MZ CAUTION -

ALL UNDERGROUND AND OVERHEAD UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THERE MAY BE ADDITIONAL UNDERGROUND AND OVERHEAD UTILITIES NOT SHOWN ON THE PLAN THAT MAY BE REQUIRED TO BE REMOVED. IT IS THE CONTRACTORS RESPONSIBILITY TO REQUEST A GOPHER STATE ONE CALL PRIOR TO THE START OF ANY CONSTRUCTION AND COORDINATE ALL WORK WITH THE RESPECTIVE UTILITY COMPANIES. J:\1005R\AB Systerns\1005R0037-Midwest Bible Baptist Church\1005R0037.000-Midwest Bible Baptist Church\CADD\Civil\C-GR-1005R0037 - PHASE 1.dwg Plotted by:Ben Blood 3/28/2018 10:16:40 AM © 2018 WIDSETH SMITH NOLTING



### **ZONING CALCULATIONS**

PARCEL ID:	740913072386 & 740942072388
ZONING DISTRICT:	R-1: MIXED SINGLE FAMILY RES
PROPOSED USAGE:	CHURCH
TOTAL LOT AREA:	303,333 SF & 117,927 SF
TOTAL LOT ACREAGE:	6.96 Ac & 2.71 Ac = 9.67 Ac
FLOOR AREA RATIO :	0.25 (TYPE 1)
MAX. ALLOWABLE FLOOR AREA:	,
TOTAL PROPOSED FLOOR AREA	A: 54,050 SF
SETBACKS:	
FRONT YARD:	40 FT
SIDE YARD:	40 FT
SUM OF SIDE YARDS:	40 FT

40 FT	REAR YARD:
40% 168,504 SF 313,500 SF	LANDSCAPE AREA: MIN. LANDSCAPE AREA: PROPOSED LANDSCAPE AREA:
NONE 35 FT A	MIN. LOT SIZE: MAX. PERMITTED HEIGHT: EXTERIOR LIGHTING:

CUT	FILL
<u>24,925 CU. YD</u> .	22,581 CU. YD.

9.67 ACRES

6.00 ACRES

0.00 ACRES

### PROPOSED FEATURES LEGEND

/ .		
/		DENOTES PROPERTY BOUNDARY
\ \	<del></del> 1035 <del></del>	DENOTES PROPOSED CONTOUR ANNOTATION
, ,	<b>x</b> 1035.00	DENOTES PROPOSED GUTTER OR FINISH ELEVATION (UNLESS OTHERWISE NOTED)
		DENOTES PROPOSED DRAINAGE ARROW
\	* * * * * *	DENOTES PROPOSED SILT FENCE
٠,		DENOTES TEMPORARY ROCK CONSTRUCTION ENTRANCE
_		DENOTES PROPOSED EROSION CONTROL BLANKET - CAT 3
\	***	DENOTES PROPOSED INLET PROTECTION

5930 BANDEL ROAD NW

MIDWEST BAPTIST CHURCH 5930 BANDEL ROAD NW ROCHESTER, MN 55901 CONTACT: PASTOR CALEB HANSON

PH: (507) 259-4106 AB SYSTEMS INC. 209 WOOD LAKE DRIVE SE ROCHESTER, MN 55904 CONTACT: PETE SCHULLER

PH: (507) 251-6890

CIVIL ENGINEER:

PROPOSER:

ARCHITECT:

WIDSETH SMITH NOLTING 3777 40TH AVE NW, SUITE 200 ROCHESTER, MN 55901 CONTACT: CRAIG BRITTON EMAIL: CRAIG.BRITTON@WSN.US.COM PH: (507) 206-2125

EMAIL: CALEBHANSON2004@GMAIL.COM

Received by ROPD 03-28-2018

# REAR YARD. SIGN REGULATIONS: **EXTERIOR STORAGE: BUFFERYARD INDICATOR:** TOTAL LOT AREA TOTAL DISTURBED AREA TOTAL INCREASE IN IMPERVIOUS SITE ADDRESS: ROCHESTER, MN 55901

# EXISTING SHED **EXISTING** HOUSE

FUTURE AUDITORIUM FFE: 1098.50 **EXISTING** EXISTING SHED

EXISTING

**CATCH BASIN** 

24" RCP CULVERT

SCALE (IN FEET)

0.22

24.630

0.22

18.200

0.61

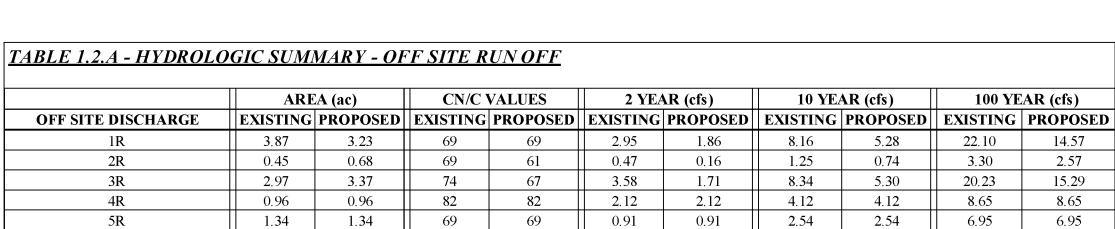
61.840

0.61

48.640

WIDSETH SMITH NOLTING

Engineering | Architecture | Surveying | Environmental



67

0.08

10.110

0.08

6.840

### TABLE 1.2.B - VOLUME DISCHARGE SUMMARY

0.08

9.671

0.08

9.671

67

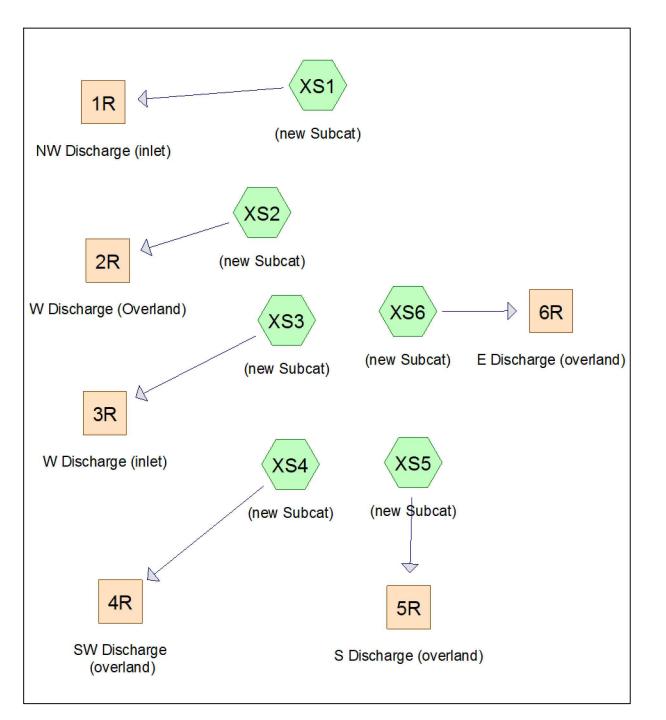
72

6R

TOTAL

	ARI	EA (ac)	CN/C	CN/C VALUES 2 YEAR (ac-ft)			10 YEAR (ac-ft)		100 YEAR (ac-ft)		
ON SITE DISCHARGE	EXISTING	PROPOSED	<b>EXISTING</b>	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	
1R	3.871	3.234	69.000	69.000	0.206	0.172	0.510	0.426	1.351	1.129	
2R	0.451	0.684	69.000	61.000	0.024	0.020	0.059	0.061	0.157	0.188	
3R	2.968	3.372	74.000	67.000	0.215	0.156	0.482	0.406	1.176	0.114	
4R	0.960	0.960	82.000	82.000	0.107	0.107	0.209	0.209	0.454	0.454	
5R	1.337	1.337	69.000	69.000	0.071	0.071	0.176	0.176	0.467	0.467	
6R	0.083	0.083	67.000	67.000	0.004	0.004	0.010	0.010	0.027	0.027	
TOTAL	9.671	9.671	72.000	69.000	0.627	0.530	1.446	1.288	3.632	2.379	

### HYDROCAD DIAGRAM



J:\1005R-AB Systems\1005R0037-Midwest Bible Baptist Church\1005R0037.000-Midwest Bible Baptist Church\CADD\Civil\C-DR-1005R0037 - PHASE 1.dwg Plotted by:Ben Blood 3/28/2018 9:47:43 AM © 2018 WIDSETH SMITH NOLTING

	1078	
1R NW DISCHARGE (INLET)		
	1080	
	TC=13.5 MIN - 1096 TC=13.5 MIN - 1096 XS1 - 1096	
92,080	XS2	
TC=6.5 MIN	1110	
	1088 10 108 10 108 10 108 10 108 10 108 108	
	1080	
	XS3	TC=50 MIN
2R	TC=11.8 MIN	6R E DISCHARGE (OVERLAND)
W DISCHARGE (OVERLAND)	1118 1118 1110 1110 1110 1108	
3R		
W DISCHARGE (INLET)	TC=16.4 MIN =	
	XS5 XS5	
	XS4 TO THE TOTAL T	
4R		
SW DISCHARGE (OVERLAND)	S DISCHARGE (OVERLAND)	

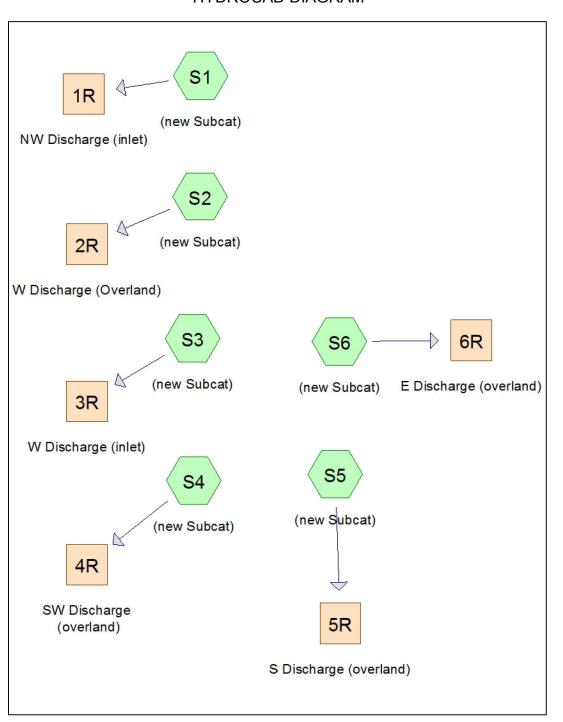
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TABLE 1.2.A - HYDROLO	GIC SUM	MARY - OF	FF SITE R	UN OFF						
AREA (ac)   CN/C VALUES   2 YEAR (cfs)   10 YEAR (cfs)   100 Y										CAR (cfs)
OFF SITE DISCHARGE	EXISTING	PROPOSED	EXISTING	PROPOSED	<b>EXISTING</b>	PROPOSED	<b>EXISTING</b>	PROPOSED	EXISTING	PROPOSED
1R	3.87	3.23	69	69	2.95	1.86	8.16	5.28	22.10	14.57
2R	0.45	0.68	69	61	0.47	0.16	1.25	0.74	3.30	2.57
3R	2.97	3.37	74	67	3.58	1.71	8.34	5.30	20.23	15.29
4R	0.96	0.96	82	82	2.12	2.12	4.12	4.12	8.65	8.65
5R	1.34	1.34	69	69	0.91	0.91	2.54	2.54	6.95	6.95
6R	0.08	0.08	67	67	0.08	0.08	0.22	0.22	0.61	0.61
TOTAL	9.671	9.671	72	69	10.110	6.840	24.630	18.200	61.840	48.640

### TABLE 1.2.B - VOLUME DISCHARGE SUMMARY

	ARE	EA (ac)	CN/C VALUES		2 YEAR (ac-ft)		10 YEAR (ac-ft)		100 YEAR (ac-ft)	
ON SITE DISCHARGE	<b>EXISTING</b>	PROPOSED	<b>EXISTING</b>	PROPOSED	EXISTING	PROPOSED	<b>EXISTING</b>	PROPOSED	EXISTING	<b>PROPOSED</b>
1R	3.871	3.234	69.000	69.000	0.206	0.172	0.510	0.426	1.351	1.129
2R	0.451	0.684	69.000	61.000	0.024	0.020	0.059	0.061	0.157	0.188
3R	2.968	3.372	74.000	67.000	0.215	0.156	0.482	0.406	1.176	0.114
4R	0.960	0.960	82.000	82.000	0.107	0.107	0.209	0.209	0.454	0.454
5R	1.337	1.337	69.000	69.000	0.071	0.071	0.176	0.176	0.467	0.467
6R	0.083	0.083	67.000	67.000	0.004	0.004	0.010	0.010	0.027	0.027
TOTAL	9.671	9.671	72.000	69.000	0.627	0.530	1.446	1.288	3.632	2.379

### HYDROCAD DIAGRAM



J:\1005R-AB Systems\1005R0037-Midwest Bible Baptist Church\1005R0037.000-Midwest Bible Baptist Church\CADD\Civil\C-DR-1005R0037 - PHASE 1.dwg Plotted by:Ben Blood 3/28/2018 9:46:26 AM © 2018 WIDSETH SMITH NOLTING

1R NW DISCHARGE (INLET)	1078 1082 1082 1090 1090 1090 1090 1090 1090 1090 109	1008
1076	TC=18.8 MIN — 1100 — 1104 — 88 — 1100 — 1106 — 1108 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1109 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1108 — 1110	1112
2R W DISCHARGE (OVERLAND)		TC=50 MIN  TC=50 MIN  S6  E DISCHARGE (OVERLAND)
3R W DISCHARGE (INLET)	TC=16.4 MIN  TC=16.4 MIN  TC=16.4 MIN	
4R SW DISCHARGE (OVERLAND)	5R S DISCHARGE (OVERLAND)	